

AMENDMENTS TO THE CLAIMS

1-76. (canceled)

77. (new) A system for recharging and communicating with an implantable medical device having a rechargeable battery, comprising:

a charging coil for inductively charging the rechargeable battery within the implantable medical device when the rechargeable battery is not depleted to zero volts;

a booster coil, wherein the booster coil is configured to operate temporarily to recover the implantable medical device when the rechargeable battery is depleted to zero volts.

78. (new) The system of claim 77, wherein the charging coil also communicates with the implantable medical device.

79. (new) The system of claim 78, wherein the charging coil communicates with the implantable medical device using FSK telemetry.

80. (new) The system of claim 78, wherein the charging coil communicates with the implantable medical device using on-off keying (OOK).

81. (new) The system of claim 77, further comprising current measuring circuitry for determining power consumption in the charging coil.

82. (new) The system of claim 77, further comprising a printed circuit board (PCB) coupled to the charging coil and to the booster coil.
83. (new) The system of claim 82, further comprising sensing circuitry on the PCB for sensing temperature.
84. (new) The system of claim 83, further comprising automatic power shut-off circuitry for automatically shutting off power to the charging coil when the sensed temperature exceeds a predetermined level.
85. (new) The system of claim 77, further comprising automatic power shut-off circuitry for automatically shutting off power to the charging coil when power consumption through the charging coil exceeds a predetermined level.
86. (new) The system of claim 77, further comprising automatic power shut-off circuitry for automatically shutting off power to the booster coil when power consumption through the booster coil exceeds a predetermined level.
87. (new) The system of claim 77, wherein the booster coil has a plurality of turns of wire in a plurality of layers wrapped around a coil spool.
88. (new) The system of claim 77, wherein the charging coil and the booster coil are contained in a housing.
89. (new) The system of claim 88, wherein the housing comprises a chair pad.
90. (new) The system of claim 88, further comprising a base station coupled to the housing.
91. (new) The system of claim 88, wherein the housing is comprised of a compliant material.

92. (new) The system of claim 88, further comprising an exterior slipcover that surrounds the housing.
93. (new) The system of claim 77, further comprising a coil assembly containing the booster coil and the charging coil.
94. (new) The system of claim 93, wherein the booster coil and charging coil are wound over a spool coil.
95. (new) A system for recharging and communicating with an implantable medical device having a rechargeable battery, comprising:
- a housing, comprising;
 - a charging coil for inductively charging the rechargeable battery within the implantable medical device when the rechargeable battery is not depleted to zero volts;
 - a booster coil, wherein the booster coil is configured to operate temporarily to recover the implantable medical device when the rechargeable battery is depleted to zero volts; and
 - a base station coupled to the housing by a cable for controlling the charging coil and the booster coil.
96. (new) The system of claim 95, wherein the charging coil also communicates with the implantable medical device.
97. (new) The system of claim 96, wherein the charging coil communicates with the implantable medical device using FSK telemetry.
98. (new) The system of claim 96, wherein the charging coil communicates with the implantable medical device using on-off keying (OOK).

99. (new) The system of claim 95, further comprising current measuring circuitry for determining power consumption in the charging coil.
100. (new) The system of claim 95, further comprising a printed circuit board (PCB) coupled to the charging coil and to the booster coil.
101. (new) The system of claim 100, further comprising sensing circuitry on the PCB for sensing temperature.
102. (new) The system of claim 101, further comprising automatic power shut-off circuitry for automatically shutting off power to the charging coil when the sensed temperature exceeds a predetermined level.
103. (new) The system of claim 95, further comprising automatic power shut-off circuitry for automatically shutting off power to the charging coil when the power consumption through the charging coil exceeds a predetermined level.
104. (new) The system of claim 95, further comprising automatic power shut-off circuitry for automatically shutting off power to the booster coil when the power consumption through the booster coil exceeds a predetermined level.
105. (new) The system of claim 95, wherein the booster coil has a plurality of turns of wire in a plurality of layers wrapped around a coil spool.
106. (new) The system of claim 95, wherein the housing comprises a chair pad.
107. (new) The system of claim 95, wherein the housing is comprised of a compliant material.
108. (new) The system of claim 95, further comprising an exterior slipcover that surrounds the housing.

109. (new) The system of claim 95, further comprising a coil assembly containing the booster coil and the charging coil.